

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: SANG-GI LEE )  
Serial No.: 10/516,901 ) Group Art Unit: 1621  
Filed: December 3, 2004 ) Examiner:  
For: METHOD FOR PREPARING ) Puttlitz, Karl J.  
ORGANIC ACID )

VIA FACSIMILE: 571-273-8300

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION PURSUANT TO 37 C.F.R. 1.132**

Sir:

Sang-gi Lee, a citizen of the Republic of Korea residing at Samsung Pureun Apt. 105, 1203 Jeonmin-dong, Yuseong-gu, Daejeon-si 305-727 Republic of Korea declares and states:

1. My educational background includes studies at the Department of Industrial Chemistry at Seoul National University, focusing primarily on producing hydrogen through use of photocatalyst.
2. I have been employed by LG Chemical, Ltd. since February 14, 2000, where I am currently a Senior Researcher working in the areas of catalyst design, liquid phase oxidation, and vapor phase hydrogenation.
3. My employment duties include developing a catalyst for isopropyl alcohol production, developing a process for isobutyric acid production, and developing a process for 2-ethylhexanoic acid production.

4. I am an inventor of the above-identified Application.
5. I have reviewed the Office action dated July 18, 2006.
6. I have supervised the application of the present invention to 2-ethylhexenal, which is an exemplary unsaturated aldehyde compound. Oxidation of 2-ethylhexenal was performed under the same conditions as the present invention.
7. In this experiment, 300 grams of 2-ethylhexenal and 50 grams of ethanol were added to a glass reactor with a capacity of 1 liter. A sufficient amount of nitrogen was added to the reactor and the reactor temperature was set to 25°C. When the temperature of the reactor became constant, the temperature was increased from 25°C to 50°C and oxygen was fed into the reactor gradually, at a flow rate of 180 ml/min with stirring of the reaction.
8. As the reaction proceeded, the reaction pressure was observed to increase gradually. When the pressure reached 6 kg/cm<sup>2</sup> (as determined using a pressure gauge), the reaction was terminated, and the product was analyzed. The conversion rate of aldehyde was found to be 82% and selectivity of organic acid was found to be 68%.
9. The conversion rate of unsaturated aldehyde (2-ethylhexenal) and the selectivity of the corresponding organic acid for the oxidation of the unsaturated aldehyde as resulting from the above-described reaction were found to be significantly lower when compared with the corresponding conversion rates and selectivities obtained for exemplary saturated aldehydes run under substantially identical conditions as shown in the above-mentioned application (Table 1. on p. 13 of the Specification as filed; see the data for Examples 1-9).
10. I declare that all statements made herein are true to the best of my knowledge and that all statements made on information and belief are believed to be true, and further that these statements and representations were made with the knowledge that willful false

statements, so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the Application or any Patent issued therefrom.

Date: 09/18/06 of sm  
SANG-GI LEE

